



A STUDY OF THE ORIGIN OF THE UNIVERSE ACCORDING TO BUDDHIST PERSPECTIVE

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ABSTRACT

Since the dawn of history many scientists, philosophers, and religious people have been obsessed with the question about the nature of man and the origin universe. There are many speculations, theories and myths put forward in order to answer this eternal question. This article attempts to compare different theories regarding the creation of the universe posited by various religious traditions and scientific theories.



KEY WORDS: Universe, World System, Galaxies.

INTRODUCTION:

In the early Buddhist *suttas*, the Pāli term commonly translated as "world" (*loka*) refers not to some purely objective universe that exists independently of experience, but to the world experienced by sentient beings. Its uses are as various as the English word "world." It would be tedious to enumerate them here since we are concerned only with the sense in which it is used to denote "the world in space." This is called *okāsa-loka* or the "space-world" (i.e. the world in space) in the Commentaries, which illustrates this sense by reference to a relevant passage in the *Visuddhimagga* it is said that in the passage, "As far as these suns and moons revolve, shining and shedding their light in space, so far extends the Thousand-fold Universe", the word *lokais* used to denote "the world in space."

There are many *Suttas* preached by Lord Buddha where the process of the Universe has been explained. An investigation of the information outlined in those *Suttas* would be revealed in brief here. Such Galaxies have been photographed with the help of equipment of Space Science. Every such galaxy includes a large number of moons, suns and planets in accordance with the size of the Galaxy. It has been discovered that each of these planets and suns keep on revolving gyrating and re-gyrating around a certain point in a certain Galaxy. Sun and the planets are gyrating (revolves round its own axis) in a circular or elliptical path.

The Buddhist conception of the Universe

The early Buddhist texts summaries their views according to the Buddhist logic of four alternatives: with regard to the extent of the universe, the following four types of views were current: (1) those who held that the universe was finite in all dimensions; (2) that the universe was infinite in all dimensions; (3) that the universe was finite in some dimensions and infinite in others; and (4) those who rejected all the above three views and held that the universe was neither finite nor infinite. Similarly, with regard to the origin of the universe, there were thinkers who put forward all four possible views, (1) some held that the universe had a beginning or origin in time; (2) others that it had no beginning in time; (3) still others that the universe had in one sense a beginning and in another sense no beginning in time. This would be so if the universe had relative origins, its substance being eternal, while it came into being and passed away from time to time; (4)

finally, there were those who put forward the theory that since time was unreal it did not make sense to say that the universe was “neither eternal nor not eternal.”

According to the Buddha, there are two worlds, the internal world and external world. Most of the time the Buddha has talked about the internal world. In the discourse of the Exposition of Elements and the Discourse of the Three Tenets, the Buddha clearly said, that this man is nothing but six kinds of elements. The six kinds of elements are: 1. Earth, 2. Water, 3. Heat, 4. Air, 5. Space and 6. Consciousness.

According to Buddhism there is no Self or permanent entity to be grasped as a soul or Self within or without. It is empty of self. On one occasion, venerable Ananda implicate to the Buddha “Empty is the word, empty is the world. In what sense it is said so?” The Buddha said, “It is, Ananda, because it is empty with self and of what belongs to a Self that it is said, empty is the world.”

Origin of the Universe and life with reference to *AggannaSutta* and other discourses

AggannaSutta in *Patikavagga* in *Dighanikaya* which belongs to *Suttapitaka* can be taken as a summary of the entire process of the Universe. A scientific approach could be found in this *Sutta* related to the origin and existence of universe. This great *Sutta* provides ground for the origin of important subject areas such as Cosmogony, Cosmology, biology, Bio-chemistry, Botany, Geology, Anthropology, Political Science and the emergence of cultural systems.

Hence, *AggannaSutta* should be quoted as an important *Sutta* which should be studied by the authorities of each subject area aforementioned. Western scholars who have studied *AggannaSutta* have appreciated the *Sutta* as a valuable *Sutta*. Professor Rhys Davis says that *AggannaSutta* provides information relevant to the origin and the expansion of socio-economic, political and religious organizations and that it is a thought provoking revelation.

How was the being?

The scientist of bio energy still fails to find out where the life has come from? But the Buddha has explained that the life has come from “*Abassara kaya*” faraway place of the universe. According to this *AggannaSutta* six features can be found related to those living beings (*satta*), who came to this world.

1. “*Manomaya*” - they are made of mind. Non-physical body.
2. “*Pitibhakkha*” - feeding on rapture.
3. “*Sayampabha*” - self luminous.
4. “*Antalikkhacara*” - traveling in the space.
5. “*Subhatthaino*” - can be easily nourished.
6. “*Cirandighamadhanamtitthanti*” - capability of living for a long time.

Most of the scientists have examined the origin of life with the help of Biochemistry and Organic Chemistry. As a result of these investigations they have found out that these various objects have come from the other world, and also the scientists have found out asteroids and meteors fell on the earth long time ago.

The Buddhism gives light to find answers to these questions to a certain extent. Once the Lord Buddha said “*anamaggoyam bhikkhawesamsaropubbakotinapannayati*.” It reveals that the origin or end of this world or beings are difficult to find. In *AggannaSutta* of *Dighanikaya* explained that the beings came from *Abassarakaya* and the beings that came from *Abassrakaya* had a radiant body, without physical body. They came here during its opening period (*vivatta kappa*) and evolved for a very long period until they develop into different kinds of shape, categories as human, animals and birds etc. And then again with the destruction of the earth (*samvatta kappa*) all beings will move to *abhassarakaya* (*abhassarasavattanikāhonti*) and become radiant bodies. This information gives us very important message that the beings are always living somewhere in this universe and this life will come to an end with the great emancipation. The creation of beings is a recurrent theme in both science and religion. To Islam, mankind was created by God. For Muslims praying five times a day is mandatory in order to praise God for his creation and ask for forgiveness. Prayer is one of the five pillars of Islam. The Qur’an clearly mentioned,

The Buddhist creation of human kind is based on craving. The events follow the principle of dependent origination. At the beginning, beings are mind-made, and come from Abhasara Brahma world, after the expansion of the world. After feasting on savory earth for a longtime their bodies become coarser. They lost their luminosity.

Turning to the scientists views on the evolution of species, Charles Darwin claimed that “natural selection” is the scientific base for the evolution and diversity of species. The Darwinists assert the notions of “survival for the fittest” whereby the fittest with advantages can go on to propagate and disappear. His theory of evolution gained popularity among the scientist community.

“The problem of the mechanism of evolution is to find a theory than can explain evolution, that can explain adaptation and that fits the facts of hereditary. The one which passes all the three tests according to the scientific establishment is “natural selection” by Charles Darwin.”¹ In short, Darwin shows that all species had not been separately created and natural selection had been the agent of change. The weak species phase out and the strong one survive.

The formation of the Universe with reference to Science and Buddhism

The galaxies are full of thousands of worlds (*Lokadhatus*). A frequently cited example of the “*Lokadhatu*” (a circle, a sphere, esp. a mythical range of mountains supposed to encircle the world) is contained in *Anguttara Nikaya, Anandavagga*. There the Buddha addresses Ananda as follows;

“As far as Moon and Sun move in their course and light up all the quarters with their radiance, so far extends the thousand fold minor world-system (*chulanikalokadhatu*). Therein are thousand moons, thousand suns, thousand sinerus, thousand lords of mounts, thousand rose apple lands, thousand *Aparagoyana*, thousand northern kurus, thousand Eastern Videhas; four thousand mighty oceans, Four thousand mighty rulers, thousand heavens of Devas that delight in creations, and thousand Brahma world. This Ananda, is called “the system of the thousand lesser world (*chulanikasahassilokadhatu*)”.

A system a thousand fold the size of this, is called “the twice-a-thousand middling thousand fold world-systems (*majjhimanikadvisahassilokadhatu*),” A system, a thousand fold the size of this, is called “the thrice-athousand major world system (*mahanikatissahassilokadhatu*)”. Now, Ananda, if the Tathagata have a wish he could make His voice throughout this last-named world- system, or, even further, if he chooses in this connection, Ananda, the Tathagata suffuses with radiance the thrice-a-thousand mighty thousand-fold world -system. When its inhabitanace perceive, this then the Tathāgata would give utterance and make the sound heard.

The white circle indicates the path taken by the Moon, the Sun and the Earth to revolve round the centre point of Galaxy at a speed of 4 million miles per hour. It takes two million years to complete a single round. The white dot indicates the centre point and the yellow star indicates the central area (*cakkavalapabbata*) of the Galaxy. The red dot indicates the Solar system.

The Clusters of Galaxies

The next unit in the universe according to the early Buddhist texts is described as consisting of thousands of minor world-systems. This is called a “Twice-a-Thousand Middling World-System” (*dvisahassimajjhimika-loka-dhatu*). It would correspond to a cluster of galaxies according to modern conceptions.

This notion of a cluster of galaxies is a fairly recent one in modern astronomy. As Professor A.C. B. Lovell, Director of the Jodrell Bank Experimental Station, said in his *B.B.C. Reith Lectures* in 1958: “Some years ago we thought that these galaxies were isolated units in space, but now we believe that the galaxies exist in great groups or clusters. In the same way that the earth and planets are bound to the sun and move as a unit through space, so, on an inconceivably vaster scale we think that the galaxies are contained in clusters as connected physical systems. The local group contains the Milky Way system, the Andromeda Nebula and perhaps two dozen others. It is not very populated compared, for example, with the Virgo

cluster of galaxies, which contains at least a thousand visible galaxies, although occupying only about twice the space of the local group.”

In the opinion of Professor Bonnor, “The Milky Way is one of a small cluster of galaxies called the Local Group, which includes all galaxies within about two million light-years from the Earth, and contains about twenty members. Beyond this distance one would have to travel about ten million light years before coming across another galaxy. Other galaxies too show a distinct tendency to cluster. The clusters may be small like the Local Group, or may contain several hundreds or even thousands of galaxies.”

We find that here “thousand” is practically the upper limit since many of the clusters of galaxies contain less. On the other hand with reference to the “Thousand-fold Minor World- System”, “thousand” appeared to be too little. Since the Dhamma is summed up in stereotyped formulas (which recur in the Pāli Canonical Texts) for easy memorization, it is possible that “thousand” was selected as a convenient common number to describe the hierarchy of units. However, elsewhere in the Canon smaller numbers of such “thousand-fold minor world systems” to be found in clusters are referred to.

In the *SankharupapattiSutta* of the *MajjhimaNikaya*, the basic unit is again the thousand-fold world-system (*sahassilokadhatu*,). But there is a reference to two, three, four ... up to hundred such world-systems grouped together (e. g. *sata-sahassī-lokadhātu*, *ibid.*). Of frequent occurrence is the *dasasahassī-loka-dhātu*, which should be translated as “the Ten of Thousand-fold World-Systems.” It is used with reference to the local group of galaxies, which consists of about 20 in all, of which about 10 cluster relatively close together. One text in fact refers to “the ten nearest island universes.”

Cakkavala (Universe)

In Pāli, too, the terms “*cakkavala*”(sabbesucakkavalesu–yakkhadevacabrahmano-Anaumpirita, *pirithchantings*) “*cakkavalapabbata*” “*cakkavalagabbha*” have been used to describe the form of a galaxy. “*cakka*” is wheel in meaning, “*vala*” is tail or milky way (like a large tail). It must be sorted out whether there is a relationship between the galaxy discovered by the modern astronomy and the thousand world system of which the Lord Buddha has mentioned. Modern astronomy has found out the Galaxies clusters. Galaxies clusters are a group of Galaxies, containing a thousand or more Galaxies, held together by the Galaxies mutual attraction. Now we can compare the Galaxies clusters and thousand-fold-world system with the above mentioned information of *Sutta*. As pointed out by the present day Astronomers, our solar system is found to be situated at the edge of one of the milky ways in the barred spiral galaxy. Planets or each sun within the above mentioned galaxy completes a circular path in million of light years within the specific period. Thus, our solar system too completes a circular path of great length of time. It means that the solar system including our sun moves to one direction day by day. The circumference of the route would amount to millions of light years. This indicates that the entire galaxy inclusive of moon and sun is not constant but is of a continuously moving nature.

The Lord Buddha too preached that the moons and suns are not stationary but are constantly moving. It is the Lord Buddha who preached for the first time that the thousand-fold world system covers the entire area illuminated by the sun and the moon while they are in motion on their own path. At the early stages astronomy had discovered that 9 planets including the earth are continuously in motion, revolving and gyrating around the sun. Western thinkers once stated that the sun is a motionless object. Some of them stated that the earth is stationary and the sun is revolving around the earth (Geocentric theory). But nowhere in the Tipitaka do we find such an indefinite statement. Clearly it has been mentioned that the sun and the moon are set on a very distant journey.

“The thousand fold minor world-system. Therein are thousand moons, thousand suns ,thousand *sinerus*, lords of mounts, thousand rose apple lands, thousand *Aparagoyana*, thousand northern *kurus*, thousand Eastern *Videhas*; four thousand Mighty Oceans, Four thousand might Rulers, thousand heavens of Devas that delight in creations, and thousand Brahma world.

Amount of world and The Great Kappa

In the tenth sutta of Anandavagga in Anguttaranikaya the thousand world system has been explained as a world consisting of 22,000 different types of worlds. Such world systems with 22,000 worlds have been called thousand-fold-minor world system and when it is multiplied by one thousand it becomes twice-a-thousand fold middle world system. Such a two thousand fold middling world system, when it is multiplied by thousand it becomes thousand fold major world system.

Thus, it gives us the idea that the universe is a place that cannot be measured in size. It is such a massive entity and so vast. By the end of the twentieth century astronomers have found out a large number of galaxies that are constituted of clusters of galaxies and stars showing the proof of Buddha's teaching. Thousand fold minor world systems. There are worlds in thousand fold minor world system.

So far no research has been undertaken in respect of world systems mentioned in the above table. It seems that astronomy which claims to have been developed today has not been successful in collecting data regarding such kind of analysis. Human intellect is incapable of comprehending even an iota of Lord Buddha's great wisdom. Everything beyond comprehension and perceptibility could be comprehended by Buddha's great wisdom. The Buddhism is not based on unbelievable phenomena or incidents which are devoid of truth. It discusses matters which are scientific and philosophical.

So far the scientists have not been able to scrutinize even a single world. It has been discovered that there are ten hundred thousand planets within our galaxy. Galaxies of this nature found within the Universe are innumerable.

Above mentioned *sutta* is very important in the investigation of cosmology. In comparison with modern investigations the "*cakkavala*", "*lokadhatu*" is equivalent to a solar system and it's a rotating system, while a "*sahassulanikalokadhatu*" is equated with a Galaxy. A "*dvisahassimajjimikalokadhatu* (twice thousand-fold- middling world systems)" is equal to a cluster of Galaxy. The "*tisahassimahnikalokadhatu*" is similar to a metagalaxy.

This *sutta* explains that the extent of such thousand fold world system (*sahasilokadhatu*) field to which the light of sun and moon extends. Accordingly, it is evident that *Tipitakasuttas*, contain clear scientific data which are better than those given by Western scientists. Therefore, it is concluded that the modern scientific investigations prove the teachings of the Buddha. According to the Buddhism there are many worlds which are full of living beings other than human world. Now the scientists are constantly forecasting the truth of this fact.

The measurement of cosmic time is the "*great kappa*" (Sanskrit: *kalpa*), which may be termed an aeon. Its duration is said to be incalculable: "Imagine a mountain consisting of a solid cube of rock, one league in length, in breadth and in height. If with a piece of cloth one were to rub it once at the end of every hundred years, the time that it would take to wear away such a mountain would not be so long as the duration of a great kappa." The great Kappa, according to LediSayidaw, is not a period so much as a notion of time itself. It corresponds to the idea of an eternity.

The great kappa is itself divided into four subsidiary kappas, each representing a cyclic period of a particular world-system.

1. *Samvattakappa* "Eon of Dissolution" – during this kappa the universe dissolves.
2. *Samvattathayikappa* "Eon of Dissolution-Duration" – during this kappa the universe remains in a state of emptiness.
3. *Vivattakappa* "Eon of Evolution" – during this kappa the universe comes into existence.
4. *Vivattathayikappa* "Eon of Evolution-Duration" – during this kappa the universe remains in existence in a steady state.

These periods which may be denoted as aeons, too, are not calculable, and may vary in length. And while there are four such aeons to an eternity, each of them in turn is subdivided into shorter kappas or ages, of more or less measurable duration. The third type of kappa is that which corresponds to the maximum life-span of any particular being. The fourth and last kappa is the period that intervenes between the destruction of one universe and the formation of another.

During this vast period of time or timelessness, for time exists only in relation to events the substance of the entire cosmos is reduced to its primal elements and distributed throughout space in an undifferentiated mass. In terms of modern physics we would say that the sub-atomic forces are disintegrated and dispersed. This may come about in two ways: the universe may expand until it reaches the point, at which the force of repulsion overcomes that of attraction, and the particles of matter are scattered widely throughout space, or it may shrink until the opposite effect is brought about, and an intense condensation of matter occurs. If, on the other hand, the universe is a “steady-state” system, neither expanding nor shrinking, the breaking up of its constituents might occur through a disturbance of the interior forces of equilibrium. Any one of these causes could bring about nuclear fission at some stage of the process. All that would then be left of the cosmos would be the released electronic nuclear energy, with which the whole of space, whether expanded, contracted or stable, would be uniformly filled.

In the *Samyutta Nikāya*, the Buddha speaks of the succession of *kappas* in the following words: “Undetermined, Bhikkhus, is the beginning of this world. The past extremity (*pubba-koti*) of beings running on in birth after birth bound by ignorance and the bonds of craving is not manifest.”

Stages of the Great Cycles

In the *Anguttara Nikāya*, the Buddha says: There are four incalculable epochs, Bhikkhus. The four are: the enveloping epoch; the enveloped epoch; the developing epoch; the developed epoch. The epoch, Bhikkhus, during which there is cosmic envelopment is not easy to reckon as so many years or centuries, or tens or hundreds of centuries.

The enveloping epoch is the period during which the world-system is in decline, the enveloped epoch is that in which it is in the state of dissolution. The developing epoch is the period of growth when life evolves from lower to higher stages; the developed epoch is that in which evolution has reached its highest peak. Having once been reinstated, while the world-system continues to be in that state it is said to be developed. Each of these periods is a fourth part of a great *kappa*, so it will be seen that every great *kappa* involves the full development of sentient life followed by its total disappearance from a world-system.

It is perhaps of rueful interest to note that the ancient Buddhist ideas regarding the destruction of worlds tally in important respects with those held by other religious and philosophical systems. Three types of destruction are postulated: by thermo-dynamic action, by liquidation and by atmospheric disturbance. These causes correspond to three of the great primaries of which matter is (in philosophical terms) composed. Earth or solidity alone is excluded as a possible agent of destruction.

There is, in any case, a clear connection in Buddhist thought between the total *kamma* of beings taking birth in a given world-system and the fate of that system considered as a physical entity. While universes, like all other phenomena, are subject to the law of dissolution and must after the lapse of ages pass away, the manner of their destruction is in a certain sense determined by the accumulated *kamma* of the beings inhabiting them. Perhaps there is a mythological shadowing forth of this truth in the almost worldwide tradition of a great deluge which brought a former epoch to an end. In a universe subject to almost entirely to mechanical laws of growth and decay it is man who is the sole willing and independently acting agent, and as such he plays a unique and decisive role in the process of cause and effect.

This idea is found not only in Buddhism but in the Taoist conception of man's relation to the cosmos, where in fact it occupies a central place. It can be a contributing factor in the destruction of a world-system, either directly or indirectly; but whether it is or not, an end must come in accordance with natural law. On the other hand, the re-formation of the universe after a period of quiescence is brought about by unexpended residual *kamma* of the beings who formerly lived in it. Thus we find it stated in the *Dīgha Nikāya*:

“Now there comes a time, brethren, when, sooner or later, after the lapse of a long, long period, this world-system passes away. And when this happens beings have mostly been reborn in the World of Radiance, and there they dwell made of mind, feeding on joy, radiating light from themselves, traversing the air, continuing in glory, and thus they remain for a long period of time.

“Now there comes also a time, brethren, when, sooner or later, this world-system begins to re-evolve. When this happens the Palace of Brahmā appears, but it is empty. And some being or other, either because his span of years has passed or his merit is exhausted, falls from that World of Radiance, and comes to life in the Palace of Brahmā. And there also he lives made of mind, feeding on joy, radiating light from himself traversing the air, continuing in glory; and thus does he remain for a long period of time.”

CONCLUSION

All of the structures of the earth, *Sumeru* and the rest are explained by the Lord Buddha. We need to understand that this world, though seeming to be boundless and consisting of innumerable things, is indeed only a small point in even this immense universe. If we combine all the universes together, we will find that even the cosmos can vary in size: large and small, depending on how many universes exist in each. The Lord Buddha discovered the existence of not one, but countless universes more than 2,500 years ago. The Buddha's discovery of 2,500 years ago conforms to scientific discoveries made only in the last few decades. It is, therefore, amazing how the Lord Buddha could discover such fact so accurately 2,500 years ago when scientific knowledge had not discovered these facts.

We have learned about the virtually limitless extent of the cosmos. The Lord Buddha also categorized the universe in detail in the way that cannot be done by scientific instruments or conventional human perceptions. Only those whose mind has been cultivated to the same degree as the Lord Buddha can see the immensity of space clearly. The Lord Buddha thus divided cosmoses into three types:

1. Small cosmoses: consisting of one thousand universes
2. Medium-sized cosmoses: consisting of one million universes
3. Large cosmoses: consisting of one billion universes

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